ELSEVIER

Journal of Photochemistry and Photobiology B: Biology 39 (1997) 285

Journal of PHOTOCHEMISTRY AND PHOTOBIOLOGY B:BIOLOGY

Author Index of Volume 39

Akgün, N., 176
Ambach, W., 130
Arcangeli, C., 258
Aubry, J.-M., 146

Bagdonas, S., 167, 172
Barthélemy, X., 213
Bazin, M., 24
Beasley, D.G., 121
Beijersbergen van Henegouwen, G.M.J., 99
Blumthaler, M., 130
Brault, D., 146
Brendel, M., 185
Brozmanova, J., 185
Busheva, M.C., 30

Čajánek, M., 243
Cajthamlová, H., 269
Cannistraro, S., 258
Chavalle, P., 146
Chen, J.X., 56
Chen, J.Y., 49
Chen, S.C., 49
Chetwer, L., 176
Cheung, N.H., 49
Church, J.S., 204
Cikánek, D., 243
Colombetti, G., 197
Cook, M.J., 279

Dobrikova, A.G., 30
Dubertret, L., 24
Dudkowiak, A., 73

Ehrenberg, B., 36
Ellinger, R., 130

Fabris, C., 279
Fasel, A., 96
Foultier, M.-T., 249
Frąckowiak, D., 73
Franck, F., 213

Gaullier, J.-M., 24
Gioffré, D., 197
Giraud, M., 24
Goc, J., 73
Görner, H., 84
Gottfried, V., 176
Gouyette, A., 249
Grebeňová, D., 269
Gruszecki, W.I., 265

Hanke, T., 219
Henriques, J.A.P., 185
Herbacek, I., 90
Holada, K., 269
Hrkal, Z., 269

Ilík, P., 243

Jirsa, M., 269
Jori, G., 279

Kagan, J., 56
Karapetyan, N.V., 19
Kessel, D., 81
Kimel, S., 176
Kindås-Mügge, I., 90
Kislov, L.D., 19
Knobler, R.M., 90
Kokesch, C., 90
König, K., 236
Kostenich, G., 36
Kritsky, M.S., 43

Lahjomri, F., 110
Leblanc, R.M., 110
Lenz, P., 249
Leung, K.N., 49
Leung, W.N., 49
Lilge, L., 229
Lyudnikova, T.A., 43

Majumdar, N., 135, 140
Mak, N.K., 49
Maksymiec, W., 265
Malik, Z., 36
Marangoni, R., 197
Marinov, J., 269
Martini, B., 197
Milanesi, C., 279
Millington, K.R., 204
Mironov, E.A., 43
Miyake, J., 73
Moore, D.E., 63
Morlet, L., 249
Moskaleva, I.V., 43
Muller, P.-A., 96

Nardello, V., 146
Nauš, J., 243
Nauta, J.M., 156
Nikkels, P.G.J., 156
Nikogosyan, D.N., 84

O'Carroll, C., 229
Ochsner, M., 1
Oelckers, S., 219
Ometto, C., 279
Onofri, S., 258
Orenstein, A., 36

Patrice, T., 249
Petkanchin, I.B., 30
Planner, A., 73
Popovic, R., 213
Pospíšil, P., 243
Puccetti, G., 110

Roberts, L.K., 121
Röder, B., 219
Roitman, L., 36
Roodenburg, J.L.N., 156
Rotomskis, R., 167, 172
Rück, A., 236
Russell, D.A., 279

Sailer, R., 176, 236
Santus, R., 24
Savransky, V.V., 224
Schneckenburger, H., 176
Sczepan, M., 219
Semenenko, V.E., 19
Singh, A.K., 135, 140
Speelman, O.C., 156
Špunda, V., 243
Stadnichuk, I.N., 19
Star, W.M., 156
Steiner, R., 236
Stewart, C., 249
Strauss, W.S.L., 176, 236
Streckyte, G., 167, 172
Suppan, P., 96

Taneva, S.G., 30
Trautinger, F., 90

Uzdensky, A.B., 224

Valla, A., 24
Van Iperen, H.P., 99
Van Leengoed, H.L.L.M., 156
Vauthey, E., 96
Vermey, A., 156
Veryasov, M.B., 19
Vonarx, V., 249

Wardak, A., 265
Wilson, B.C., 229
Witjes, M.J.H., 156

Zhou, W., 63
Zucconi, L., 258

Elsevier Science S.A.

ELSEVIER

Journal of Photochemistry and Photobiology B: Biology 39 (1997) 287–292

Journal of PHOTOCHEMISTRY AND PHOTOBIOLOGY B:BIOLOGY

Subject Index of Volume 39

Absorption spectroscopy
phototransformations of sensitizers. 1. Significance of the nature of the sensitizer in the photobleaching process and photoproduct formation in aqueous solution, 167
Action spectra
single neuron response to pulse-periodic laser microirradiation. Action spectra and two-photon effect, 224
Acute and delayed inflammatory reactions
photophysical and photobiological processes in the photodynamic therapy of tumours, 1
African scorpion "Pandinus imperator"
photoluminescence of the African scorpion "Pandinus imperator", 96
Aliphatic amino acids
indirect 248 nm 20 ns photolysis of aliphatic amino acids in aqueous solution, 84
Altitude effect
increase in solar UV radiation with altitude, 130
5-Aminolevulinic acid
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24
Animal
in vivo photodynamic therapy with the new near-IR absorbing water soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
Antarctic fungus
fluorescence study on whole Antarctic fungal spores under enhanced UV irradiation, 258
Antioxidants
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24
Apoptosis
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
Autofluorescence
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Autoimmune disease
clinical and mechanistic aspects of photopheresis, 99
Auxiliary pigments
high temperature chlorophyll fluorescence rise within 61–67 °C. Spectroscopic study with intermittent light grown barley leaves, 243

Bacteriochlorophyll *c*
the influence of the presence of lipid on the aggregation of 8,12-diethyl farnesyl bacteriochlorophyll *c* located in adsorbed layers and monolayers, 73

Bacteriorhodopsin
role of H-bond interactions in the protonation and wavelength regulation in retinal schiff base chromophores, 135
BLM
the effect of blue light on electron transport in photosystem II reconstituted in planar bilayer lipid membrane, 265
Blue-light responses
the UV radiation-driven reduction of pterins in aqueous solution, 43
Bone marrow
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269

Carcinogens
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Chlorin
pharmacokinetics of N-aspartyl chlorin e6 in cancer patients, 81
in vitro and in vivo spectrofluorometry of a water-soluble *meta*-(tetrahydroxyphenyl)chlorin (*m*-THPC) derivative, 249
Chlorophyll fluorescence
high temperature chlorophyll fluorescence rise within 61–67 °C. Spectroscopic study with intermittent light grown barley leaves, 243
Chlorpromazine
clinical and mechanistic aspects of photopheresis, 99
Chorioallantoic membrane
photodynamic efficacy of naturally occurring porphyrins in endothelial cells in vitro and microvasculature in vivo, 176
Chromophores
role of metal cations in colour transition and hydrolysis of the chromophores of retinal-binding photoreceptor proteins, 140
Colon carcinoma
in vivo photodynamic therapy with the new near-IR absorbing water soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
Colour transition
role of metal cations in colour transition and hydrolysis of the chromophores of retinal-binding photoreceptor proteins, 140
Contact hypersensitivity
clinical and mechanistic aspects of photopheresis, 99
sunscreens prevent local and systemic immunosuppression of contact hypersensitivity in mice exposed to solar-simulated ultraviolet radiation, 121
Cystine
the photodegradation of wool keratin II. Proposed mechanisms involving cystine, 204

Delayed luminescence
the influence of the presence of lipid on the aggregation of 8,12-diethyl farnesyl bacteriochlorophyll *c* located in adsorbed layers and monolayers, 73

Elsevier Science S.A.

Dermatology
clinical and mechanistic aspects of photopheresis, 99
Diffusion
pulsed photoacoustic spectroscopy applied to the diffusion of sunscreen chromophores in human skin: the weakly absorbent regime, 110
Direct vs. indirect cell killing
photophysical and photobiological processes in the photodynamic therapy of tumours, 1
DNA cleavage
sites of preferred interaction between double-stranded pBR322 DNA and 7-methylpyrido[3,4-c]psoralen, 56

Electric light scattering
electric dipole moments of PS I-enriched membrane fragments, 30
Electric polarizability
electric dipole moments of PS I-enriched membrane fragments, 30
Electron acceptors
studies on the O-J-I-P transient of chlorophyll fluorescence in relation to photosystem II assembly and heterogeneity in plastids of greening barley, 213
Endothelial cells
photodynamic efficacy of naturally occurring porphyrins in endothelial cells in vitro and microvasculature in vivo, 176
ESR spectroscopy
the photodegradation of wool keratin II. Proposed mechanisms involving cystine, 204
Ethylenediaminetetraacetic acid (EDTA)
the UV radiation-driven reduction of pterins in aqueous solution, 43
Extracorporeal photochemotherapy
clinical and mechanistic aspects of photopheresis, 99
Ex vivo tissue samples
a solubilization technique for photosensitizer quantification in ex vivo tissue samples, 229

Fabrea salina
effects of UV-B irradiation on the motility and photomotility of the marine ciliate *Fabrea salina*, 197
Flow cytometry
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
Fluorescence
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Fluorescence imaging microscopy
a study of the binding of merocyanine 540 to myeloid leukemia M1 cells using an intensified charge-coupled device for fluorescence imaging microscopy, 49
Fluorescence spectroscopy
correlation between porphyrin biosynthesis and photodynamic inactivation of *Pseudomonas aeruginosa* after incubation with 5-aminolaevulinic acid, 236
fluorescence study on whole Antarctic fungal spores under enhanced UV irradiation, 258
Free radical production
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
Furocoumarin
clinical and mechanistic aspects of photopheresis, 99

Glutathione
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24
Graft rejection
clinical and mechanistic aspects of photopheresis, 99
Greening
studies on the O-J-I-P transient of chlorophyll fluorescence in relation to photosystem II assembly and heterogeneity in plastids of greening barley, 213

HEL
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
High temperature
high temperature chlorophyll fluorescence rise within 61–67 °C. Spectroscopic study with intermittent light grown barley leaves, 243
HL60
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
Hordeum vulgare
studies on the O-J-I-P transient of chlorophyll fluorescence in relation to photosystem II assembly and heterogeneity in plastids of greening barley, 213
HPLC
correlation between porphyrin biosynthesis and photodynamic inactivation of *Pseudomonas aeruginosa* after incubation with 5-aminolaevulinic acid, 236
Human skin
pulsed photoacoustic spectroscopy applied to the diffusion of sunscreen chromophores in human skin: the weakly absorbent regime, 110
Hydrogen peroxide
overexpression of the small heat shock protein, hsp27, confers resistance to hyperthermia, but not to oxidative stress and UV-induced cell death, in a stably transfected squamous cell carcinoma cell line, 90
Hydrolysis
role of metal cations in colour transition and hydrolysis of the chromophores of retinal-binding photoreceptor proteins, 140
Hydrophilic vs. lipophilic sensitizers
photophysical and photobiological processes in the photodynamic therapy of tumours, 1

Imaging
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Immunoprotection
sunscreens prevent local and systemic immunosuppression of contact hypersensitivity in mice exposed to solar-simulated ultraviolet radiation, 121
Immunosuppression
sunscreens prevent local and systemic immunosuppression of contact hypersensitivity in mice exposed to solar-simulated ultraviolet radiation, 121
In vivo
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156

27 kD heat shock protein
overexpression of the small heat shock protein, hsp27, confers resistance to hyperthermia, but not to oxidative stress and UV-induced

cell death, in a stably transfected squamous cell carcinoma cell line, 90
77 K excitation and emission spectra
high temperature chlorophyll fluorescence rise within 61–67 °C. Spectroscopic study with intermittent light grown barley leaves, 243

Laser-induced fluorescence
in vivo photodynamic therapy with the new near-IR absorbing water soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
Lipid peroxidation
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
Lutetium texaphyrin
in vivo photodynamic therapy with the new near-IR absorbing water soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
Lymphocytes
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269

Merocyanine
a study of the binding of merocyanine 540 to myeloid leukemia M1 cells using an intensified charge-coupled device for fluorescence imaging microscopy, 49
Metal cations
role of metal cations in colour transition and hydrolysis of the chromophores of retinal-binding photoreceptor proteins, 140
8-Methoxypsoralen
clinical and mechanistic aspects of photopheresis, 99
7-Methylpyrido[3,4-c]psoralen
sites of preferred interaction between double-stranded pBR322 DNA and 7-methylpyrido[3,4-c]psoralen, 56
Mice
sunscreens prevent local and systemic immunosuppression of contact hypersensitivity in mice exposed to solar-simulated ultraviolet radiation, 121
Microspectrofluorometry
in vitro and in vivo spectrofluorometry of a water-soluble *meta*-(tetrahydroxyphenyl)chlorin (*m*-THPC) derivative, 249
Monolayers
the influence of the presence of lipid on the aggregation of 8,12-diethyl farnesyl bacteriochlorophyll *c* located in adsorbed layers and monolayers, 73
Motility
effects of UV-B irradiation on the motility and photomotility of the marine ciliate *Fabrea salina*, 197
Myeloid leukemia
a study of the binding of merocyanine 540 to myeloid leukemia M1 cells using an intensified charge-coupled device for fluorescence imaging microscopy, 49

Nanosecond UV photolysis
indirect 248 nm 20 ns photolysis of aliphatic amino acids in aqueous solution, 84
NCTC 2544 keratinocytes
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24
Neuron response
single neuron response to pulse-periodic laser microirradiation. Action spectra and two-photon effect, 224
4-Nitroquinoline 1-oxide
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Normal and tumor tissue damage
in vivo photodynamic therapy with the new near-IR absorbing water soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
NPe6
pharmacokinetics of N-aspartyl chlorin e6 in cancer patients, 81

Optical fibre spectrofluorometer
in vitro and in vivo spectrofluorometry of a water-soluble *meta*-(tetrahydroxyphenyl)chlorin (*m*-THPC) derivative, 249
Optical reflectance spectroscopy
the photodegradation of wool keratin II. Proposed mechanisms involving cystine, 204

Permanent dipole moment
electric dipole moments of PS I-enriched membrane fragments, 30
Pharmacokinetics
pharmacokinetics of N-aspartyl chlorin e6 in cancer patients, 81
Pheophorbide a
time-resolved detection of singlet oxygen luminescence in red cell ghost suspensions, 219
Photoacoustic
the influence of the presence of lipid on the aggregation of 8,12-diethyl farnesyl bacteriochlorophyll *c* located in adsorbed layers and monolayers, 73
Photo-allergy
clinical and mechanistic aspects of photopheresis, 99
Photobleaching
phototransformations of sensitizers. 1. Significance of the nature of the sensitizer in the photobleaching process and photoproduct formation in aqueous solution, 167
Photodegradation
the photodegradation of wool keratin. II. Proposed mechanisms involving cystine, 204
Photodestruction
phototransformations of sensitizers. 2. Photoproducts formed in aqueous solutions of porphyrins, 172
Photodynamic
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
Photodynamic dose
phototransformations of sensitizers. 1. Significance of the nature of the sensitizer in the photobleaching process and photoproduct formation in aqueous solution, 167
Photodynamic therapy
photophysical and photobiological processes in the photodynamic therapy of tumours, 1
in vivo photodynamic therapy with the new near-IR absorbing water soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
photodynamic efficacy of naturally occurring porphyrins in endothelial cells in vitro and microvasculature in vivo, 176
correlation between porphyrin biosynthesis and photodynamic inactivation of *Pseudomonas aeruginosa* after incubation with 5-aminolaevulinic acid, 236
in vitro and in vivo spectrofluorometry of a water-soluble *meta*-(tetrahydroxyphenyl)chlorin (*m*-THPC) derivative, 249
tumour-localizing and tumour-photosensitizing properties of zinc(II)-octapentyl-phthalocyanine, 279

Photofrin
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Photohemolysis
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
Photoinduced ICL
role of *PSO* genes in the repair of photoinduced interstrand cross-links and photooxidative damage in the DNA of the yeast *Saccharomyces cerevisiae*, 185
Photoluminescence
photoluminescence of the African scorpion "Pandinus imperator", 96
Photo-movement
effects of UV-B irradiation on the motility and photomotility of the marine ciliate *Fabrea salina*, 197
Photooxidative damage
role of *PSO* genes in the repair of photoinduced interstrand cross-links and photooxidative damage in the DNA of the yeast *Saccharomyces cerevisiae*, 185
Photopharmacology
clinical and mechanistic aspects of photopheresis, 99
Photopheresis
clinical and mechanistic aspects of photopheresis, 99
Photoproducts
phototransformations of sensitizers. 1. Significance of the nature of the sensitizer in the photobleaching process and photoproduct formation in aqueous solution, 167
phototransformations of sensitizers. 2. Photoproducts formed in aqueous solutions of porphyrins, 172
Photoreduction
the UV radiation-driven reduction of pterins in aqueous solution, 43
Photosensitization
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24
sites of preferred interaction between double-stranded pBR322 DNA and 7-methylpyrido[3,4-c]psoralen, 56
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
tumour-localizing and tumour-photosensitizing properties of zinc(II)-octapentyl-phthalocyanine, 279
Photosensitized electron transfer
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
Photosensitized tumour therapy
phototransformations of sensitizers. 1. Significance of the nature of the sensitizer in the photobleaching process and photoproduct formation in aqueous solution, 167
Photosensitizer quantification
a solubilization technique for photosensitizer quantification in ex vivo tissue samples, 229
Photosynthetic electron transport
the effect of blue light on electron transport in photosystem II reconstituted in planar bilayer lipid membrane, 265
Photosystem
high temperature chlorophyll fluorescence rise within 61–67 °C. Spectroscopic study with intermittent light grown barley leaves, 243
Photosystem II
studies on the O-J-I-P transient of chlorophyll fluorescence in relation to photosystem II assembly and heterogeneity in plastids of greening barley, 213
the effect of blue light on electron transport in photosystem II reconstituted in planar bilayer lipid membrane, 265
Phototherapy
clinical and mechanistic aspects of photopheresis, 99
Phthalocyanine
tumour-localizing and tumour-photosensitizing properties of zinc(II)-octapentyl-phthalocyanine, 279
B-Phycoerythrin
two γ-polypeptides of B-phycoerythrin from *Porphyridium cruentum*, 19
Phycoerythrobilin
two γ-polypeptides of B-phycoerythrin from *Porphyridium cruentum*, 19
Phycourobilin
two γ-polypeptides of B-phycoerythrin from *Porphyridium cruentum*, 19
Plasma
pharmacokinetics of N-aspartyl chlorin e6 in cancer patients, 81
Porphyridium cruentum
two γ-polypeptides of B-phycoerythrin from *Porphyridium cruentum*, 19
Porphyrinogens
correlation between porphyrin biosynthesis and photodynamic inactivation of *Pseudomonas aeruginosa* after incubation with 5-aminolaevulinic acid, 236
Porphyrins
phototransformations of sensitizers. 1. Significance of the nature of the sensitizer in the photobleaching process and photoproduct formation in aqueous solution, 167
phototransformations of sensitizers. 2. Photoproducts formed in aqueous solutions of porphyrins, 172
photodynamic efficacy of naturally occurring porphyrins in endothelial cells in vitro and microvasculature in vivo, 176
correlation between porphyrin biosynthesis and photodynamic inactivation of *Pseudomonas aeruginosa* after incubation with 5-aminolaevulinic acid, 236
Precancerous lesion
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Proliferation
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
Protonation
role of H-bond interactions in the protonation and wavelength regulation in retinal schiff base chromophores, 135
Protoporphyrin IX
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24
Pseudomonas aeruginosa
correlation between porphyrin biosynthesis and photodynamic inactivation of *Pseudomonas aeruginosa* after incubation with 5-aminolaevulinic acid, 236
PS I-enriched particles
electric dipole moments of PS I-enriched membrane fragments, 30
PS II-enriched particles
electric dipole moments of PS I-enriched membrane fragments, 30
PSO genes
role of *PSO* genes in the repair of photoinduced interstrand cross-links and photooxidative damage in the DNA of the yeast *Saccharomyces cerevisiae*, 185
Pterins
the UV radiation-driven reduction of pterins in aqueous solution, 43
Pulsed photoacoustic spectroscopy
pulsed photoacoustic spectroscopy applied to the diffusion of sunscreen chromophores in human skin: the weakly absorbent regime, 110
Pulsed photoirradiation
in vivo photodynamic therapy with the new near-IR absorbing water

soluble photosensitizer lutetium texaphyrin and a high intensity pulsed light delivery system, 36
Pulse-periodic laser irradiation
single neuron response to pulse-periodic laser microirradiation. Action spectra and two-photon effect, 224
Pyrrole
n-conjugates of 2,5-disubstituted pyrrole and glutathione. Evaluation of their potency as antioxidants against photosensitization of NCTC 2544 keratinocytes by excess endogenous protoporphyrin IX, 24

Quantum yield of singlet oxygen formation
Measurement of photogenerated singlet oxygen ($^1O_2$ ($^1\Delta_g$)) in aqueous solution by specific chemical trapping with sodium 1,3-cyclohexadiene-1,4-diethanoate, 146

Red cell ghost
time-resolved detection of singlet oxygen luminescence in red cell ghost suspensions, 219
Release of eicosanoids and complement factors
photophysical and photobiological processes in the photodynamic therapy of tumours, 1
Restriction enzymes
sites of preferred interaction between double-stranded pBR322 DNA and 7-methylpyrido[3,4-c]psoralen, 56
Retinal-binding photoreceptor proteins
role of metal cations in colour transition and hydrolysis of the chromophores of retinal-binding photoreceptor proteins, 140
Retinal proteins
role of H-bond interactions in the protonation and wavelength regulation in retinal schiff base chromophores, 135
Retinal Schiff base
role of H-bond interactions in the protonation and wavelength regulation in retinal schiff base chromophores, 135
Rhodopsin
role of H-bond interactions in the protonation and wavelength regulation in retinal schiff base chromophores, 135

Saccharomyces cerevisiae
role of *PSO* genes in the repair of photoinduced interstrand cross-links and photooxidative damage in the DNA of the yeast *Saccharomyces cerevisiae*, 185
Salt effect
studies on the O-J-I-P transient of chlorophyll fluorescence in relation to photosystem II assembly and heterogeneity in plastids of greening barley, 213
Singlet oxygen
time-resolved detection of singlet oxygen luminescence in red cell ghost suspensions, 219
Solar UV radiation
increase in solar UV radiation with altitude, 130
Solubilization technique
a solubilization technique for photosensitizer quantification in ex vivo tissue samples, 229
Squamous cell carcinoma
in vivo photo-detection of chemically induced premalignant lesions and squamous cell carcinoma of the rat palatal mucosa, 156
Steady state absorption and fluorescence
phototransformations of sensitizers. 2. Photoproducts formed in aqueous solutions of porphyrins, 172
γ-Subunit
two γ-polypeptides of B-phycoerythrin from *Porphyridium cruentum*, 19
Sulfamethoxazole
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
Sunscreen
sunscreens prevent local and systemic immunosuppression of contact hypersensitivity in mice exposed to solar-simulated ultraviolet radiation, 121
Sunscreen chromophores
pulsed photoacoustic spectroscopy applied to the diffusion of sunscreen chromophores in human skin: the weakly absorbent regime, 110
Supercoiled DNA–psoralen binding
sites of preferred interaction between double-stranded pBR322 DNA and 7-methylpyrido[3,4-c]psoralen, 56

Thermotolerance
overexpression of the small heat shock protein, hsp27, confers resistance to hyperthermia, but not to oxidative stress and UV-induced cell death, in a stably transfected squamous cell carcinoma cell line, 90
Thin layer chromatography
phototransformations of sensitizers. 2. Photoproducts formed in aqueous solutions of porphyrins, 172
Thylakoid membrane
high temperature chlorophyll fluorescence rise within 61–67 °C. Spectroscopic study with intermittent light grown barley leaves, 243
Time-resolved luminescence
time-resolved detection of singlet oxygen luminescence in red cell ghost suspensions, 219
$TPPS_4$
photodynamic effects of meso-tetra(4-sulfonatophenyl)porphine on human leukemia cells HEL and HL60, human lymphocytes and bone marrow progenitor cells, 269
Transparent trap of singlet oxygen
Measurement of photogenerated singlet oxygen ($^1O_2$ ($^1\Delta_g$)) in aqueous solution by specific chemical trapping with sodium 1,3-cyclohexadiene-1,4-diethanoate, 146
Trimethoprim
photosensitizing activity of the anti-bacterial drugs sulfamethoxazole and trimethoprim, 63
Tumours
tumour-localizing and tumour-photosensitizing properties of zinc(II)-octapentyl-phthalocyanine, 279
Two-photon absorption in water
indirect 248 nm 20 ns photolysis of aliphatic amino acids in aqueous solution, 84
Two-photon effect
single neuron response to pulse-periodic laser microirradiation. Action spectra and two-photon effect, 224
Type I and II mechanisms
photophysical and photobiological processes in the photodynamic therapy of tumours, 1

Ultraviolet A radiation
clinical and mechanistic aspects of photopheresis, 99
UV
sunscreens prevent local and systemic immunosuppression of contact hypersensitivity in mice exposed to solar-simulated ultraviolet radiation, 121
fluorescence study on whole Antarctic fungal spores under enhanced UV irradiation, 258
UV-B
effects of UV-B irradiation on the motility and photomotility of the marine ciliate *Fabrea salina*, 197
UV radiation
the UV radiation-driven reduction of pterins in aqueous solution, 43
overexpression of the small heat shock protein, hsp27, confers resistance to hyperthermia, but not to oxidative stress and UV-induced cell death, in a stably transfected squamous cell carcinoma cell line, 90

Variable fluorescence
studies on the O-J-I-P transient of chlorophyll fluorescence in relation to photosystem II assembly and heterogeneity in plastids of greening barley, 213
Vasculature
photodynamic efficacy of naturally occurring porphyrins in endothelial cells in vitro and microvasculature in vivo, 176
Vibrational spectroscopy
the photodegradation of wool keratin II. Proposed mechanisms involving cystine, 204
Water-soluble trap of singlet oxygen
measurement of photogenerated singlet oxygen ($^1O_2$ ($^1\Delta_g$)) in aqueous solution by specific chemical trapping with sodium 1,3-cyclohexadiene-1,4-diethanoate, 146
Wavelength regulation
role of H-bond interactions in the protonation and wavelength regulation in retinal schiff base chromophores, 135
Wool keratin
the photodegradation of wool keratin II. Proposed mechanisms involving cystine, 204